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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,517	09/08/2006	Giorgio Figura	93099001	9284
<div>46507      7590      04/16/2009</div> <div>HONEYWELL TURBO TECHNOLOGIES</div> <div>3201 WEST LOMITA BOULEVARD (LAW DEPARTMENT)</div> <div>TORRANCE, CA 90505</div>				
<div>EXAMINER</div> <div>YOUNGER, SEAN JERRARD</div>				
<div>ART UNIT</div> <div>3745</div>		<div>PAPER NUMBER</div>		
<div>MAIL DATE</div> <div>04/16/2009</div>		<div>DELIVERY MODE</div> <div>PAPER</div>		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/567,517

**Applicant(s)**

FIGURA ET AL.

**Examiner**

SEAN J. YOUNGER

**Art Unit**

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3, 4, 6, 8 and 9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 6, 8 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 23 December, 2008 have been fully considered but they are not persuasive.
2. In response to Applicant's argument that the teachings of Klass do not apply to vanes in a turbocharger turbine, Klass teaches a method of making an airfoil shape where a strip of sheet metal is formed as a loop. Arnold discloses a turbocharger with variable vanes, having an airfoil shape, arranged in the nozzle section. The vanes are made by a different process than the one claimed, but the reference discloses that other methods of manufacture can be used, as cited in the rejection. Klass provides a structure which is readily available to one of ordinary skill as a method of making an airfoil shape. When the teaching of the wrapped and welded airfoil is applied to the known turbocharger airfoil, the obvious combination reads on the claimed invention.
3. In response to Applicant's argument that combining Arnold and Klass would not yield an airfoil made of a strip of sheet metal affixed to a shaft, there is no other location except the Arnold shaft (38) to affix an airfoil shape. Therefore the hollow, wrapped sheet metal airfoil, as taught by Klass, would inherently be fixed to the outer peripheral portion of the shaft.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 4, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold [U.S. 4,726,744] in view of Klass [U.S. 3,707,750]. Regarding claims 1, 3 and 4, Arnold discloses a variable nozzle device adapted to be mounted in an exhaust gas turbine of a turbocharger, comprising an annular nozzle passage formed by two opposing wall members [column 4, lines 4-8] and vanes (34). A portion of the shaft protrudes beyond an edge of the airfoil by a predetermined amount to form a stepped portion (40) contactable with one of the opposing wall members. Arnold fails to disclose that the vane airfoils are formed by a sheet metal contour, but discloses that methods other than those disclosed can be employed in their manufacture [column 3, lines 61-65]. Klass teaches that vane airfoil shapes can be made by wrapping strips of sheet metal (2, 4) so as to form a loop [figure 5; column 5, lines 1-11]. The ends (12, 13) of the loop are then joined by welding at the trailing edge [column 5, lines 11-15]. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the variable nozzle device of Arnold to include vanes made from a sheet metal forming process, as taught by Klass, because the modification amounts to a synthesis of known prior art elements which could have been made by one of ordinary skill with predictable results.

6. Regarding claims 8 and 9, Arnold discloses a turbocharger (10) comprising an exhaust gas turbine (12) comprising a variable nozzle device according to claim 1, and a turbine wheel (14) which is drivable by exhaust gas passed through the annular nozzle passage of the variable nozzle device.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold [U.S. 4,726,744] in view of Klass [U.S. 3,707,750] and Troyer [U.S. 3,038, 698]. Arnold, as modified by Klass in the rejection of claim 1 above, discloses all elements substantially as claimed, but fails to disclose that the sheet metal contour is attached to the shaft by spot welding. Troyer teaches an airfoil (3) with a hollow section which is attached to a shaft (18) by welding [column 3, lines 13-14]. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to further modify the variable nozzle device of Arnold by attaching the formed airfoil shape to the shaft with welds, as taught by Troyer, in order to secure the airfoil to the shaft.

8. It is noted that claims 1, 3, 4 and 6 introduce limitations such as "formed by wrapping a strip of sheet metal," "formed by joining two ends," "joined by spot welding," and "attached to said shaft by spot welding" which are being treated as product-by-process limitations; that is, that the vane can be "formed by wrapping a strip of sheet metal so as to form...a loop," etc. As set forth in MPEP 2113, product-by-process claims are not limited to the manipulations of the recited steps, only to the structure implied by the steps. Once a product appearing to be substantially the same or similar

is found, a 35 U.S.C. 102/103 rejection may be made and the burden is shifted to applicant to show an unobvious difference, see MPEP 2113. See *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). Thus, even though *Klass* is silent as to what type of weld is used to attach the hollow airfoil to the shaft, it appears that the modified apparatus, as applied in the art rejection, would be the same or similar as the plates claimed.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN J. YOUNGER whose telephone number is

(571)270-3763. The examiner can normally be reached on M-F 7:30-5:00 EST, Alt. Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on 571-272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sean J. Younger/  
Examiner, Art Unit 3745

/Edward K. Look/  
Supervisory Patent Examiner, Art Unit 3745